REMARKS

Claims 42-52 are pending in the application. Claims 42-52 stand rejected. New claims 53 and 54 are being added. Support for new claims 53 and 54 can be found in the specification as originally filed. No new matter is believed to be introduced by way of the new claims.

Claims 42, 46, 48, and 51 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ozaki (U.S. Patent No. 5,502,749, hereinafter referenced as "Ozaki"), in view of Scarpa (U.S. Patent No. 5,636,250, hereinafter referenced as "Scarpa").

Claims 43, 44 and 50 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ozaki, in view of Scarpa, as applied to Claim 42, and further in view of Nakano *et al.* (U.S. Patent No. 5,559,789), hereinafter referenced as "Nakano."

Claim 45 was rejected under 35 U.S.C. §103(a) as being unpatentable over Ozaki, in view of Scarpa and Nakano, as applied to Claim 44, and further in view of Ojanpera *et al.* (U.S. Patent No. 5,703,873), hereinafter referenced as "Ojanpera."

Claims 47, 49 and 52 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ozaki, in view of Scarpa, as applied to Claim 42, and further in view of Hill (U.S. Patent No. 3,795,772), hereinafter referenced as "Hill."

Claim 42 recites:

> A method for managing a signal, comprising:
> searching for a pilot tone by scanning a frequency range in predetermined frequency steps;
> recovering a pilot tone sub-symbol;
> calculating a parameter value difference between the pilot tone sub-symbol and a consecutive pilot tone sub-symbol; and
> **adjusting a clock signal frequency depending on the parameter value difference to lock on a phase and frequency of the pilot tone.**

In contrast, Ozaki's system does not adjust a clock signal frequency depending on a parameter value difference between the pilot tone sub-symbol and a consecutive pilot tone sub-symbol to lock on a phase and frequency of the pilot tone. Specifically, Ozaki merely describes a two stage phase correcting method that employs a radio receiver device containing first and second phase shift information detection units. The first detection unit is placed to detect a first phase shift information of the received data. The second detection unit shifts the phase of the

received data to detect a second phase shift. The phase shift is corrected by comparing the output signals from the first and second phase shift detection units. The received data includes a transmission signal, which is not a pilot tone.

Item 6 of the present Office Action refers to column 3, lines 5-10 of Ozaki and states that Ozaki adjusts a clock signal frequency depending on the parameter value difference (i.e., parameter value difference between the pilot tone sub-symbol and a consecutive pilot tone sub-symbol) to lock on a phase and frequency of the pilot tone. Applicants respectfully disagree with this view. Ozaki, as explained in column 3, lines 5-10, merely corrects a phase shift by comparing the output signals of the first and second phase shift units.

Thus, in addition to scanning a frequency range in predetermined frequency steps, Applicants' Claim 42 distinguishes over Ozaki in that it adjusts a clock signal frequency depending on the parameter value difference between the pilot tone sub-symbol and a consecutive pilot tone sub-symbol to lock on a phase and frequency of the pilot tone.

Thus, Ozaki does not teach or disclose "adjusting a clock signal frequency depending on the parameter value difference to lock on a phase and frequency of the pilot tone," as required by Applicants' Claim 42.

Scarpa is being combined with Ozaki because Ozaki does not disclose "searching for a pilot tone by scanning a frequency range in predetermined frequency steps," as recited in Applicants' Claim 42. However, Scarpa merely describes the use of a sliding pass-band filter, whose center frequency is moved across a pre-selected frequency region where it is anticipated that a pilot tone will be found, to determine the presence or absence of a pilot tone. Scarpa does not disclose or teach "adjusting a clock signal frequency depending on the parameter value difference to lock on a phase and frequency of the pilot tone," as required by Applicants' Claim 42.

A hypothetical system combining the teachings of Ozaki and Scarpa may be able to scan a frequency range in predetermined frequency steps but it would not adjust adjusting a clock signal frequency depending on the parameter value difference to lock on a phase and frequency of the pilot tone.

Therefore, it is Applicants' position that Claim 42 is allowable over Ozaki in view of Scarpa. Accordingly, Applicants respectfully request that the 35 U.S.C. § 103(a) rejection of this claim be withdrawn.

In the Office Action Mailed on March 17, 2008, U.S. Patent 5,502,749 to Kesner *et al.*, hereinafter referenced as "Kesner," was combined with Ozaki since Ozaki does not disclose "adjusting a clock signal frequency depending on the parameter value difference to lock on a phase and frequency of the pilot tone." However, Kesner merely describes a method for providing improved clock generation and distribution in a fully redundant computer system. Although Kesner discusses a phase lock used to ensure that his timing signals are in phase, Kesner does not adjust a clock signal frequency depending on a parameter value difference between the pilot tone sub-symbol and a consecutive pilot tone sub-symbol to lock on a phase and frequency of the pilot tone, as required by Applicants' Claim 1.

Independent Claim 48 includes similar elements ("an adjustor of a signal frequency of the clock source depending on the parameter value difference to lock on a phase and frequency of the pilot tone") as independent Claim 42. Accordingly, Applicants respectfully request that the rejection of Claim 48 under 35 U.S.C. § 103(a) be withdrawn for the reasons presented above.

Since Claims 46 and 51 depend from independent Claims 42 and 48, Applicants respectfully request that these dependent claims be allowed for at least the same reasons as the base claim from which they depend.

Nakano is being combined with Scarpa and Ozaki because neither one of these references disclose identifying and/or recovering pilot tone sub-symbols, as required by Applicants' claims 43, 44, and 50. However, Nakano merely introduces a pilot generating circuit for generating a pilot signal that has a constant transmission power level. Nakano does not disclose or teach "adjusting a clock signal frequency depending on the parameter value difference to lock on a phase and frequency of the pilot tone," as required by Applicants' Claims 42 and 48.

Moreover, the hypothetical system combining the teachings of Ozaki, Scarpa, and Nakano system even if presented with a pilot tone by Nakano would make no use of the pilot tone.

Since claims 43, 44, and 50 depend from base Claims 42 or 48, it is Applicants' position that these claims are allowable over Ozaki in view of Scarpa and further in view of Nakano.

Accordingly, Applicants respectfully request that the 35 U.S.C. § 103(a) rejection of these claim be withdrawn.

Ojanpera is being combined with Scarpa, Ozaki, and Nakano because these references do not teach or disclose scanning a plurality of bins to locate a bin containing the pilot tone sub-symbol, as required by Applicants' claim 45. However, Ojanpera merely introduces a method for synchronizing subscriber equipment. Ojanpera does not disclose or teach "adjusting a clock signal frequency depending on the parameter value difference to lock on a phase and frequency of the pilot tone," as required by Applicants' Claims 42 and 48. Since claim 45 depends from base Claims 42 or 48, it is Applicants' position that this claim is allowable over Ozaki in view of Scarpa and Nakano and further in view of Ojanpera. Accordingly, Applicants respectfully request that the 35 U.S.C. § 103(a) rejection of this claim be withdrawn.

Hill is being combined with Scarpa and Ozaki because neither one of these references disclose using a clock signal frequency for phase locked loop processing, as required by Applicants' claims 47, 49, and 52. However, Hill merely introduces a synchronization system with multiple control loops that are used to optimize rate of frequency acquisition and synchronization. Hill does not disclose or teach "adjusting a clock signal frequency depending on the parameter value difference to lock on a phase and frequency of the pilot tone," as required by Applicants' Claims 42 and 48. Since claims 47, 49, and 52 depend from base Claims 42 or 48, it is Applicants' position that these claims are allowable over Ozaki in view of Scarpa and further in view of Hill. Accordingly, Applicants respectfully request that the 35 U.S.C. § 103(a) rejection of these claim be withdrawn.

Information Disclosure Statement

An Information Disclosure Statement (IDS) is being filed concurrently herewith. Entry of the IDS is respectfully requested.

CONCLUSION

In view of the above amendments and remarks, it is believed that all currently pending claims, claims 42-54, are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

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